

What is claimed is:

1. A memory circuit comprising:
  - a regular memory cell array;
  - 5 a redundant memory cell array which enables to replace a failed portion in the regular memory cell array;
  - a redundant replacement memory for storing data on the failed portion in the regular memory cell array; and
  - a pre-charge circuit disposed in the regular memory
  - 10 cell array, wherein
    - depending on the data on the failed portion, the failed portion in the regular memory cell array is replaced with the redundant memory cell array, while a pre-charge path is closed which leads to the pre-charge circuit
    - 15 corresponding to the failed portion.
2. The memory circuit according to claim 1, wherein
  - the regular memory cell array has a plurality of redundant replacement units and is replaced with the
  - 20 redundant memory cell array for each redundant replacement unit having the failed portion,
  - the redundant replacement memory outputs a redundant replacement specify signal for specifying the redundant replacement unit having the failed portion, and
  - 25 the pre-charge circuit has a pre-charge switch for each redundant replacement unit so that the pre-charge switch corresponding to the redundant replacement unit

having the failed portion is turned off by the redundant replacement specify signal.

3. The memory circuit according to claim 2, wherein  
5 when the redundant replacement unit having the failed portion is replaced with the redundant memory cell array, a pre-charge switch corresponding to the redundant memory cell array conducts.

10 4. The memory circuit according to claim 1, wherein the regular memory cell array and the redundant memory cell array have a plurality of memory cells and a plurality of bit lines connected to the plurality of memory cells, the plurality of bit lines being pre-charged by the  
15 pre-charge circuit.

5. The memory circuit according to claim 4, wherein the memory cell is a static memory cell.

20 6. A memory circuit comprising:  
a regular memory cell array;  
a redundant memory cell array which enables to replace a failed portion in the regular memory cell array;  
and  
25 a redundant replacement memory for storing data on the failed portion in the regular memory cell array,  
wherein

the redundant replacement memory includes a redundant cell holding failed portion data, and a redundant latch circuit for latching the failed portion data held by the redundant cell,

5 depending on the data latched by the redundant latch circuit, the failed portion is replaced with the redundant memory cell array, and

the redundant latch circuit latches test data supplied from an external terminal during testing, for  
10 temporary replacement with the redundant memory cell array.

7. The memory circuit according to claim 6, wherein during the testing, the supply of the failed portion  
15 data held by the redundant cell to the redundant latch circuit is prohibited.

8. The memory circuit according to claim 6, wherein the redundant replacement memory includes a first  
20 switch interposed between the redundant cell and the redundant latch circuit, and a second switch interposed between the external terminal and the redundant latch circuit, and wherein

during regular operation, control is provided such  
25 that the first switch is conducting and the second switch is non-conducting, whereas during the testing, control is provided such that the first switch is non-conducting and

the second switch is conducting.

9. The memory circuit according to claim 8, wherein  
during the testing, control is provided such that  
5 the second switch temporarily conducts and thereafter goes  
non-conducting.

10. The memory circuit according to claim 6, wherein  
the external terminal is an I/O terminal for data  
10 input to and data output from the memory cell array.

11. The memory circuit according to claim 6, wherein  
depending on the data latched by the redundant latch  
circuit, a pre-charge path is closed which leads to the  
15 pre-charge circuit corresponding to the failed point.